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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,991	04/27/2001	Maurice Rivoire	AMAT/5297/DD/LOW K/JW	1361
32588	7590	10/21/2003	EXAMINER ROSE, ROBERT A	
APPLIED MATERIALS, INC. 2881 SCOTT BLVD. M/S 2061 SANTA CLARA, CA 95050			ART UNIT 3723	PAPER NUMBER 13
DATE MAILED: 10/21/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. <b>09/844,991</b>	Applicant(s) <b>Rivoire et al</b>	
	Examiner <b>Robert Rose</b>	Art Unit <b>3723</b>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Aug 4, 2003
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8, 10-19, 21, 24-30, and 32-36 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8, 10-19, 21, 24-30, and 32-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). <u>11</u> | 6) <input type="checkbox"/> Other:  |

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### DETAILED ACTION

1. Receipt is acknowledged of Applicant's Prior art Statement, filed August 4, 2003.
2. Claims 1-7, 9, 20, 22-23, and 31 have been canceled.
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 8, 10-19, 21, 24-30, and 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Homma et al in view of WO 00/49647. Homma et al disclose a method for polishing organosilicate layer on a substrate comprising substantially all of the subject matter set forth in applicant's claims above. Note the use of an aqueous solution of abrasive within the pH range recited. The values of pressure and platen rotational speed disclosed in Homma et al are within the recited ranges of polishing pressure and platen rotational speed. While Homma et al disclose ceria as the abrasive of choice, it is known from WO 00/49647 to use silicon dioxide colloidal or fumed slurry in lieu of ceria, to polish low dielectric polymeric insulating layers on wafers(page 11, lines 19-21). To substitute a conventional inexpensive abrasive such as silicon dioxide, aluminum oxide, zirconium oxide, or titanium oxide for the ceria abrasive in the method of Homma et al would have been obvious in view of WO 00/49647. The recited percent weight of the abrasive slurry recited falls within the range set forth in WO 00/49647(page 6, lines 21-

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22), and to perform the method of Homma et al with abrasive concentration within this range would have been obvious in view of WO 00/49647.

5. Applicant's arguments with respect to claims 8, 10-19, 21, 24-30, and 32-36 have been considered but are moot in view of the new ground(s) of rejection.

6. In view of the new grounds of rejection not necessitated by Applicant's amendment, this action is not made final.

7. Any inquiry concerning this communication should be directed to Robert Rose at telephone number (703) 308-1360.

rr

October 17, 2003.

**ROBERT A. ROSE**  
**PRIMARY EXAMINER**  
**ART UNIT 323**

